

Chapter 1: Purpose and Need

1.1 INTRODUCTION

The Utah Department of Transportation (UDOT), in conjunction with the Federal Highway Administration (FHWA), is proposing right-of-way acquisition and safety improvements along SR-12 between Escalante and Boulder in Garfield County, Utah located from mile post (MP) 59.8 to 86.3. SR-12 is located in south-central Utah and is the only principal highway that runs east of Panguitch, linking US 89 with SR-24. SR-12 connects the communities of Tropic, Cannonville, Henrieville, Escalante, Boulder, Grover, and Torrey in Garfield and Wayne Counties.

This portion of SR-12 is currently a two-lane road with tight curves; there are no passing lanes and no median. In recognition of its scenic character, SR-12 has been designated as a Scenic Byway by UDOT and the U.S. Forest Service (USFS) and as an All-American Road by the U.S. Department of Transportation. Figure 2.1 depicts the proposed improvements along the project area's 26.5-mile corridor.

The proposed action includes the improvements numbered below, and the numbers correspond to their location on Figure 2.1. These improvements could reasonably be constructed in the next five to ten years based on future funding availability.

- 1) Obtain right-of-way
- 2) Replace Calf Creek Bridge
- 3) Stabilize roadway at three locations where embankment or barrier is failing
- 4) Provide slow-vehicle turnouts at six locations
- 5) Improve two intersections
 - Hole-in-the-Rock Road
 - Calf Creek Recreation Area
- 6) Widen roadway at one narrow curve
- 7) Improve signing for bicycles, animal presence, and roadside hazards

Grand Staircase-Escalante National Monument

Approximately 75 percent of the SR-12 project area, or nearly 20 miles of roadway between Escalante and Boulder, is within the legislative bounds of the Grand Staircase-Escalante National Monument. The Grand Staircase area was declared a national monument in 1996. In 2004, *The Grand Staircase-Escalante National Monument Front Country Visitor Study* reported that “over 600,000 people visit the monument every year, and recreational uses are increasing” (Blahna 2004). The most recent census of visitors—March to October in 2004—indicated that the majority of visitors to the monument (63 percent) were from states other than Utah, and, further, 23 percent of these visitors were from outside of the United States. Approximately 42 percent of the visitors noted that they stayed in local motels or bed-and-breakfast facilities in Escalante or Boulder during their visit to the area.

A small portion of the project is also located in Dixie National Forest.

Cooperating Agency—Bureau of Land Management

The monument is managed by the Bureau of Land Management (BLM). Given the unique project setting within the monument and the presence of wilderness study areas (WSAs), the BLM participated in this project study as a cooperating agency.

Statewide Transportation Improvement Program and Related Actions

The 2007 to 2012 Statewide Transportation Improvement Program (STIP) includes the preparation of an environmental document for this project, and funding is through federal and state sources. The 2007 to 2012 STIP also includes three other projects to enhance visitor services, such as interpretive signs, overlooks, and wayside exhibits. These improvements were identified as a part of the *Scenic Byway 12 Signage and Interpretative Master Plan*, discussed in Section 1.3. BLM is preparing an environmental assessment (EA) for a day-use portal near the Hogsback, located close to MP 80. UDOT and BLM are coordinating on access (ingress/egress) to this site. Garfield County is planning a visitor information center on the east side of Escalante City that chronicles the epic story of the “Hole-in-the-Rock” pioneers. The funding for this Escalante Heritage Center is provided by the Transportation Enhancement program, and construction is planned for 2009.

1.2 PROJECT PURPOSE

The purpose of the SR-12 project is to do the following:

- Provide adequate space for UDOT to perform ongoing maintenance operations on the roadway and supporting infrastructure
- Improve safety and infrastructure where the roadway facilities are deficient or deteriorating
- Accommodate the wide range of corridor users

1.3 STATE, REGIONAL, AND LOCAL PLANS

The following discussion provides relevant information from existing management plans that have helped identify the needs for this project.

Grand Staircase-Escalante National Monument Management Plan (2000)

The monument was established to preserve this remote area, known as the “last place in the continental U.S. mapped,” and to protect the biological, geological, cultural, and pioneering resources within the region (BLM 2000). The Secretary of the Interior, through BLM, was assigned management responsibilities of the monument. BLM prepared the *Grand Staircase-Escalante National Monument Management Plan* in November 1999, and the plan became effective in February 2000.

The plan offers specific management decisions and objectives for public lands under jurisdiction of BLM. These management objectives include the protection of the cultural features, WSAs, and other vast natural and human resources. The plan denotes the section of the monument that includes SR-12 as the “Frontcountry Zone” and lists safe transportation for visitors as a goal within this area. The Frontcountry Zone is the focal point for visitation to the monument and includes interpretation sites, waysides, trails, and other visitor facilities.

The plan also includes transportation objectives and states “The BLM will continue to work with [UDOT] on issues related to route maintenance for Highways 12 and 89. This will cover

maintenance and safety work activities. Any new ground disturbance will require site-specific environmental analysis” (BLM 2000).

Scenic Byway 12 Corridor Management Plan (2001)

The *Scenic Byway 12 Corridor Management Plan* was developed by the Five County Association of Governments in December 2001 to plan for the future of the SR-12 corridor and to pursue All-American Road designation. The *Scenic Byway 12 Corridor Management Plan* was a collaborative effort among the towns, counties, federal agencies, and private landowners to develop a document to guide future decisions regarding SR-12.

This *Scenic Byway 12 Corridor Management Plan* includes a “Transportation and Safety Plan” for SR-12, and it notes “safety for travelers on Scenic Byway 12 was one of the concerns voiced by the public in town meetings” (Angus 2001). Along SR-12, from Escalante to Boulder, the plan notes “problems [with] keeping shoulder material in place ... rock slides, wash-outs, narrow road [width], [limited] pavement depth, [poor] drainage.” This plan also notes the need for regular maintenance and some management strategies to increase safety by accommodating pedestrians, cattle ranchers, and bicyclists. Additional safety strategies identified include installing traffic warnings and directional signage, constructing pull-outs and shoulders, and providing safety and road information.

Scenic Byway 12 Signage and Interpretive Master Plan (2007)

Based on resource strategies identified in the 2001 *Scenic Byway 12 Corridor Management Plan*, a signage and interpretative plan was started in 2005 and completed in spring 2007. Representatives from the Scenic Byway 12 Committee, Dixie National Forest, the Grand Staircase-Escalante National Monument, Bryce Canyon and Capitol Reef National Parks, Garfield and Wayne County Travel Councils, and UDOT worked together to develop a comprehensive interpretative plan for the entire length of the SR-12 corridor.

SR-12 & SR-63 Corridor Transportation Plan (2002)

In 2002, UDOT prepared the *SR-12 & SR-63 Corridor Transportation Plan* to identify the current transportation needs for these two roads. Active public involvement and stakeholder participation identified several problem areas along SR-12 and reinforced the public’s sincere interest in preserving the character of SR-12. Many of the problems identified were consistent with the road deficiencies and safety issues identified in the *Scenic Byway 12 Corridor Management Plan*. These common problems include the increase in bicycle traffic, lack of shoulders, and the need for passing areas. The *SR-12 & SR-63 Corridor Transportation Plan* also notes several deficient structures and the way in which current unresolved right-of-way issues prevent many routine maintenance operations along several stretches of SR-12.

Calf Creek Bridge Structure Inventory (2005)

A structural inventory to evaluate the replacement of the deteriorated Calf Creek Bridge at MP 74.5 was initiated in 2004. Based on the bridge’s unique setting, its location within the monument, and the additional needs along the section of SR-12 between the communities of Escalante and Boulder that the public noted, UDOT determined that a more comprehensive improvement study for SR-12 from Escalante to Boulder, including the Calf Creek Bridge, was warranted.

1.4 CONTEXT SENSITIVE COMMITTEE

UDOT Guidance on Purpose and Need Statements, consistent with the UDOT context sensitive solutions (CSS) goals and objectives, states that project elements beyond the state transportation system should be included as part of the project purpose. The project team incorporated the context sensitive goals and objectives into the overall purpose and need through a context sensitive committee (CSC) and public input.

A focus group identified as the CSC was developed to define a clear understanding of the local area's context and to incorporate these context sensitive needs into the project as appropriate. The CSC included representatives from FHWA, UDOT, BLM, Escalante, Boulder, Wild Utah Project, Southern Utah Wilderness Alliance (SUWA), Garfield County, Garfield School District, and local biking, ranching, and tourist interests.

The project team asked the public and the CSC to identify their future vision of SR-12 from Escalante to Boulder, and these visions became the local goals and objectives for the project. Both the public and the CSC characterized SR-12 with divergent contexts: one as beautiful and serene; and the other as rugged, winding, and dangerous. The CSC and the public noted the importance of preserving the characteristics that make SR-12 special while implementing improvements.

The input received from the public and the CSC provided valuable clarification of specific problem areas, needs, and interests in the project. The project needs, identified by the public, included specific road deficiencies and road aesthetics, safety needs for bicycles, and the need for long-term solutions in regards to maintenance issues. These identified needs were also consistent with UDOT's transportation plan, the need for right-of-way—which UDOT had identified previously—and other related agency management plans.

The context sensitive goals and objectives are summarized as the following:

- Preserve the history of the corridor
- Contribute to the economics and culture of the community
- Meet the needs of the natural environment and preserve water resources
- Limit changes to the roadway and do only what is absolutely necessary to meet safety and traffic demand needs
- Maintain the character and visual appeal of the road, and, if possible, enhance the driving experience
- Incorporate science, research, and facts into an open decision-making process
- Improve ability to perform adequate maintenance operations appropriate to place

See Chapter 6 for a more detailed discussion on the CSC.

1.5 PROJECT NEEDS

The project team identified key problems on the corridor through the recent SR-12 studies listed above, through public input, and through engineering analysis. Problems include the following:

- Inadequate or undefined right-of-way widths that inhibit regular maintenance activities
- Deteriorating roadway infrastructures—such as eroding pavement edge and shoulder material—and deteriorating embankments, guard rails, barriers, culverts, and bridges

- Accidents and driver frustration due to widely varying driver speeds and a lack of passing opportunities

Insufficient or unclear right-of-way widths constrain maintenance activities, resulting in a patchwork of short-term fixes that, although temporarily provide for immediate safety needs, tend to be repetitive and lead to higher maintenance costs. These fixes are ineffective in maintaining the long-term stability of the road. Long-term maintenance solutions are needed to prevent failure of roadway embankments and barriers and to improve the condition of the pavement edge, shoulders, and structures.

The widely varying speeds at which users travel this corridor is due to the nature of its users: domestic and international tourists, commuters, cattle ranchers, pedestrians, and bicyclists. Drivers encounter sudden, unexpected speed differences at curves, intersections, and side roads, which result in an increased risk of accidents, unlawful passing, and a basic inconvenience to the commuters on the road.

Specific needs have been identified for the next five to ten years and are discussed in the following sections.

1.5.1 Right-of-Way Deficiencies

Because the right-of-way is not well-defined and because there are WSAs adjacent to the road, it is not clear to UDOT or BLM where UDOT has rights for infrastructure maintenance. The current right-of-way is vaguely defined by Revised Statute (RS) 2477 as the “edge of disturbance.” The edge of disturbance is not precise and changes with time; therefore the boundary of the UDOT right-of-way is undefined both legally and physically. And even if the edge of disturbance or some other fixed boundary near the edge of disturbance were well-defined, there would not be adequate space to perform normal maintenance operations.

To complicate the issue further, WSA boundaries are not precisely defined either and activities within WSAs are strictly prohibited. Only temporary activities meeting non-impairment are allowed in WSAs.

Current Right-of-Way

The UDOT right-of-way for SR-12 includes fee simple ownership, easements, prescriptive rights (i.e., rights acquired over private lands through use), and RS-2477 rights. The width and type of right-of-way varies because SR-12 crosses private, state, and federal lands. UDOT has a 200-foot right-of-way easement from BLM for some short sections near MP 62 and from MP 64.3 to MP 68.9. UDOT has an RS-2477 right-of-way on BLM land for 14.2 miles from MP 68.9 and MP 83.1. The UDOT right-of-way is generally 100-feet wide across private land and 100-feet to 200-feet wide across USFS land.

Revised Statute 2477

RS-2477 was adopted in 1866 and was intended to facilitate settlement of the West. It reads in its entirety: “The right-of-way for the construction of highways over public lands, not reserved for public uses, is hereby granted.” Congress repealed RS-2477 in 1976, allowing existing RS-2477 rights to remain valid. There is not a constant right-of-way width defined for RS-2477 rights. The right-of-way limits are generally based on vague criteria in BLM correspondence that states the

right-of-way from “edge of disturbance to edge of disturbance” is granted to UDOT. RS-2477 rights are controversial and interpreted differently by different parties because the RS-2477 right-of-way width is not well-defined and changes with time.

On a typical state highway, the right-of-way is defined as a consistent width that provides the opportunity to maintain the roadway, side-slopes, and drainage features. Two-hundred feet is consistent with the right-of-way width through BLM land where UDOT has an existing right in the project area: from MP 64.3 to MP 68.9. Typically, UDOT requests a 400-foot wide right-of-way corridor for a two-lane highway through BLM lands.

Wilderness Study Areas

There are WSAs along sections and often on both sides of SR-12 within the monument. The BLM is mandated to preserve wilderness, including WSAs. The purpose of WSAs is to protect wilderness values until congressional legislation passes that either designates these areas as wilderness or releases them for non-wilderness uses. WSAs are managed under the *Interim Management Policy for Lands Under Wilderness Review* (IMP).

In 1991, the *Utah Statewide Wilderness Study Report* made suitability recommendations for the areas within the Monument to Congress. To date, there has been no legislation received from Congress on the designation of these areas as wilderness. Proposals for the WSA boundaries have been recommended; however, the boundaries have not been delineated in detail. Boundaries are mapped on a large scale and are described with words like “toe of slope” and “edge of disturbance” (Mermejo 2005). Boundaries have never been staked or surveyed and cannot be precisely located. UDOT and BLM are coordinating the requirements related to RS-2477 right-of-way and to the preservation of the WSAs.

Maintenance Activities

On all roads, routine maintenance is required to keep infrastructure—such as culverts, guard rails, embankments, barriers, and bridges—operating as intended. UDOT maintenance personnel have expressed frustration with their ability to maintain SR-12 because maintenance crews cannot operate outside the existing ill-defined edge of disturbance. This leads to confusion as to what is allowed and results in the degradation of the road and supporting infrastructure. For example, it is not clear if UDOT is allowed to clear out roadside ditches and place the material on the other side of the road.

1.5.2 Crash Data

In September of 2002, UDOT Traffic and Safety issued the *Operational Safety Report* for SR-12. The results of the report showed that the section of SR-12 between MP 69.9 to 77 has an average crash rate of 0.64 compared to the 2.3 average rate expected on rural highways. The average severity rate is 2.17 compared to the 1.70 average rate expected on rural highways. In comparison to other rural highways, the crash rates for SR-12 indicate that the number of crashes is lower than expected and the severity is higher than expected.

Because of the unique context and probable differences in SR-12’s character in comparison to an average rural highway, detailed crash data that included location, type, severity, and cause was evaluated to identify if crashes were clustered in certain locations and if similar causes were related

to the crashes. Crash data reported to the Utah Highway Patrol and Garfield County between 1993 and 2003 was collected and used to evaluate the crashes for each section of the road.

Crash Types

Most of the crashes on SR-12 are due to animals and excessive speed. Four crashes resulted from improper passing. Deer can frequently be seen between MP 61 and 67 and between MP 82 and 86 in late fall to early spring. Crash data shows a cluster involving wildlife between MP 61.5 and 62.

Between MP 69 to 71 (a.k.a. Head of the Rocks) the speed is posted at 30 mph with warning signs for the horizontal curves; however, there are still crashes in this area related to excessive speed. Three crashes have occurred at the Head of the Rocks pullout (MP 69.5): one due to a domestic animal, one due to excessive speed, and one due to a driver error (left of center).

A high concentration of crashes occurs at MP 64.4 (Hole-in-the-Rock Road). Four crashes at this intersection are due to conflicts between cars turning (decelerating or accelerating) and vehicles traveling through at high speed. Sight distance is limited at this intersection, compounding the problem.

Two crashes have occurred at a sharp turn located at an area known as “The Tank” (MP 71.0). Both were single vehicle crashes involving excessive speed, and both resulted in the vehicle running off the road.

One crash occurred at the Calf Creek Recreation Area access. Although, the access has a turning radius insufficient for large recreation vehicles (RVs), vehicles often make multi-point turns into the campground, creating a hazard. BLM does not allow oversized vehicles in this area. However, the sign prohibiting oversized vehicles is placed after the entrance to the campground. This placement forces oversized vehicles to either back out onto SR-12 or continue forward into the campground to try to turn around. BLM is currently in the process of determining the size of vehicle that will be allowed in the campground.

1.5.3 Geometrics

SR-12 follows the geology of the area, resulting in existing roadway geometrics that vary greatly throughout the project length. Within the project area, SR-12 contains 97 horizontal curves, with radii ranging from a design speed of 20 mph to just over 75 mph. This curving alignment is part of what defines the context of SR-12. As discussed previously, the public and CSC expressed a desire to maintain the character and to limit changes.

The geometry was evaluated using *UDOT Resurfacing, Restoration, and Rehabilitation (3R) Standards for Non-Freeway Systems*. These standards are intended to enhance safety, improve operating conditions, and extend the service life of non-freeway projects. If the radius does not meet requirements for new design, these standards allow for existing horizontal and vertical curves to remain. Factors such as crash history, stopping sight distance, and the difference between design and posted speed are taken into consideration. Drivers are alerted to these areas with speed advisory signs, curve signs, or chevrons.

The existing geometry is within the range allowed by the 3R design standards. Curve realignment is not proposed as part of this project.

1.5.4 Deficient and Deteriorating Roadway Facilities

Bridges

There are three major structures within the project area: the Escalante River Bridge, the Calf Creek Bridge, and the Boulder Creek box culvert. The Escalante River Bridge and the Boulder Creek box culvert are in good condition; however, the Calf Creek Bridge is in poor condition with a sufficiency rating of 58 out of 100.

More specifically, the Calf Creek Bridge is a structurally deteriorated, steel-plate, pipe structure that was constructed in 1964. The creek generally runs parallel to the highway between the Calf Creek Recreation Area and the Escalante River before making a sharp turn immediately upstream of the bridge. Due to the skewed approach, the creek flows erode the southwest abutment on the inlet end and create sediment deposition on the north side of the creek under the highway. Scour attacking the Calf Creek Bridge is eroding the fill slope and compromising the pavement section.

Graphic 1. 1: Existing Flow Path of Calf Creek



Slope/Shoulder Stability

There are many sections along the corridor where the terrain and fill slopes are highly erodible. Issues related to slope stability fit into two categories: eroding cliffs and slopes above the road and eroding fill slopes that support the road. Erosion from slopes above the road is evidenced during the wet season when large amounts of water cause rock to slide onto the road and adjacent drainages. These slides create safety hazards along the road; the local school bus driver has been stopping frequently to move rocks out of the travel lanes. In addition, the debris from these slides interferes with the current drainage system. Eroded material falls in the roadside cut ditches and diminishes runoff capacity. Some material is transported downstream by runoff into catch basins and pipe culverts.

The unstable rock and erosion also play large roles in the deteriorating foundation that supports the road. It is difficult with steep side slopes to maintain the stability of the shoulders adjacent to the travel lanes. The road breaks away at the edges as a result of water run-off and lack of support from the fill slopes. The breaking edge of pavement minimizes the usable road width and compounds the hazards of tight curves to larger vehicles—such as trucks, trailers, and RVs—

which typically need larger widths to maneuver turns. In particular, there is an unstable location at MP 74.8 where the side slope is being held in place by guardrail, as shown in the photo below. If this makeshift support system fails, part of the roadway will collapse.

Graphic 1. 2: Milepost 74.8—Unstable Location



Drainage

Maintenance issues related to drainage are generally caused by erosion. As discussed above, erosion of the side slopes above the roadway results in debris filling the cut ditches. These ditches need to be cleared with heavy equipment frequently, especially during wet years when rock falls are common.

There are approximately 160 pipe culverts in varying conditions crossing under the highway within the project area. The culvert inlets need frequent cleaning to remove debris and maintain flow.

In addition to the limited right-of-way or area available to access the ditches and culvert inlets, there are problems associated with the frequent supply of debris material removed from the ditches and culverts. There are limited locations on-site to place the removed material, and, the further the material is hauled off-site, the higher the cost. Also, additional hauling cost is incurred when fill material is later needed to be hauled to stabilize side slopes.

In areas where the roadway is constructed on fill material, sheet flow off the roadway creates erosion of the fill slope. UDOT maintenance has addressed this issue in some locations by moving the water off the road to an appropriate discharge point. Small asphalt berms along the side of the road have been constructed to carry the concentrated flow to a more stable location so as not to erode away the side slopes.

Barriers and Guardrails

Unstable shoulders and side slopes also cause the instability of roadside barriers and guardrails. At MP 77.5, a section of concrete barrier is supported only by the pins and barrier sections on

either side; there is no pavement below. Many of the side slopes along the road are 3:1 or steeper and are not protected by a barrier or guardrail.

At MP 75.4 and from MP 77.5 to 77.7, sections of pavement have sloughed off under the unsupported concrete barrier. Examples are shown in Graphics 1.3 and 1.4.

Graphic 1. 3: Unstable Barrier from MP 77.5 to 77.7



Graphic 1. 4: Unstable Barrier at MP 75.4



Miscellaneous Maintenance and Operation

Due to the freezing and thawing caused by the extreme weather changes of the project area, falling rocks are common throughout the corridor. Removal of boulders and fallen debris is required to keep the roadway open and safe for travel. To maintain the area, material stockpile sites need to be identified. Stockpile sites hold future fill that will match the natural material in the area. These sites provide economical locations where fallen material can be stored and used to maintain fill slopes. Rock and soils within the area have very distinct colors, and it is desirable to have fill material blend in with the existing colors.

1.5.5 Travel Demand—Accommodating the Wide Range of Corridor Users

SR-12 serves a multitude of tourism destinations, including Bryce Canyon and Capitol Reef National Parks; Glen Canyon Recreation Area; Kodachrome, Escalante, and Anasazi State Parks; the Grand Staircase-Escalante National Monument; and the Powell, Escalante, and Teasdale Ranger Districts of the Dixie National Forest. Between Escalante and Boulder, SR-12 is located within the

Frontcountry Zone of the monument. Monument visitors use SR-12 to access points of interest, including Calf Creek Recreation Area and Hole-in-the-Rock Road. The corridor is also a destination unto itself for many visitors touring in passenger cars, RVs, motorcycles, and even bicycles.

SR-12 is the only link between some towns in southern Utah, including Escalante and Boulder. Residents use SR-12 to commute between communities, deliver goods and services, and access adjacent properties. Local ranchers use SR-12 to transport cattle to and from grazing allotments along the corridor, and truckers use SR-12 to transport commodities. This overall mix of vehicle types traveling on SR-12, between Escalante and Boulder, is 80 percent passenger cars, one percent trucks, 18 percent RVs, and less than one percent buses.

Bicyclist Needs

With outfitters located in Escalante, bicycle use is becoming more prevalent along the corridor. Both individual riders and large touring groups travel along SR-12. A combination of the limited sight distances, narrow lanes, and slower travel speeds of bicycle riders creates safety hazards for both automobile drivers and bicyclists. Because there is little or no shoulder along much of the roadway, bicyclists are forced to ride in the travel lanes.

Varying Driver Speeds

Different users travel the corridor at different speeds. Local users are familiar with the road and desire to travel the corridor quickly. Recreational visitors are unfamiliar with the road and travel the corridor more slowly, either intimidated by the rugged geometry or wanting to soak in the scenic wonders. Large trucks and buses also tend to travel the corridor slowly due to difficulty negotiating the terrain. Slow-moving cars, bicycles, RVs, trucks, and buses can obstruct local through-traffic. With limited sight distances and narrow lanes, it is impossible to pass safely in many areas. There are no designated turnouts for slow-moving traffic, albeit some pullouts for scenic overlooks or interpretive waysides. According to the FHWA publication, *Synthesis of Safety Research Related to Speed and Speed Management*, crash risk is greatest when vehicles are traveling at speeds differing by more than 15 mph.

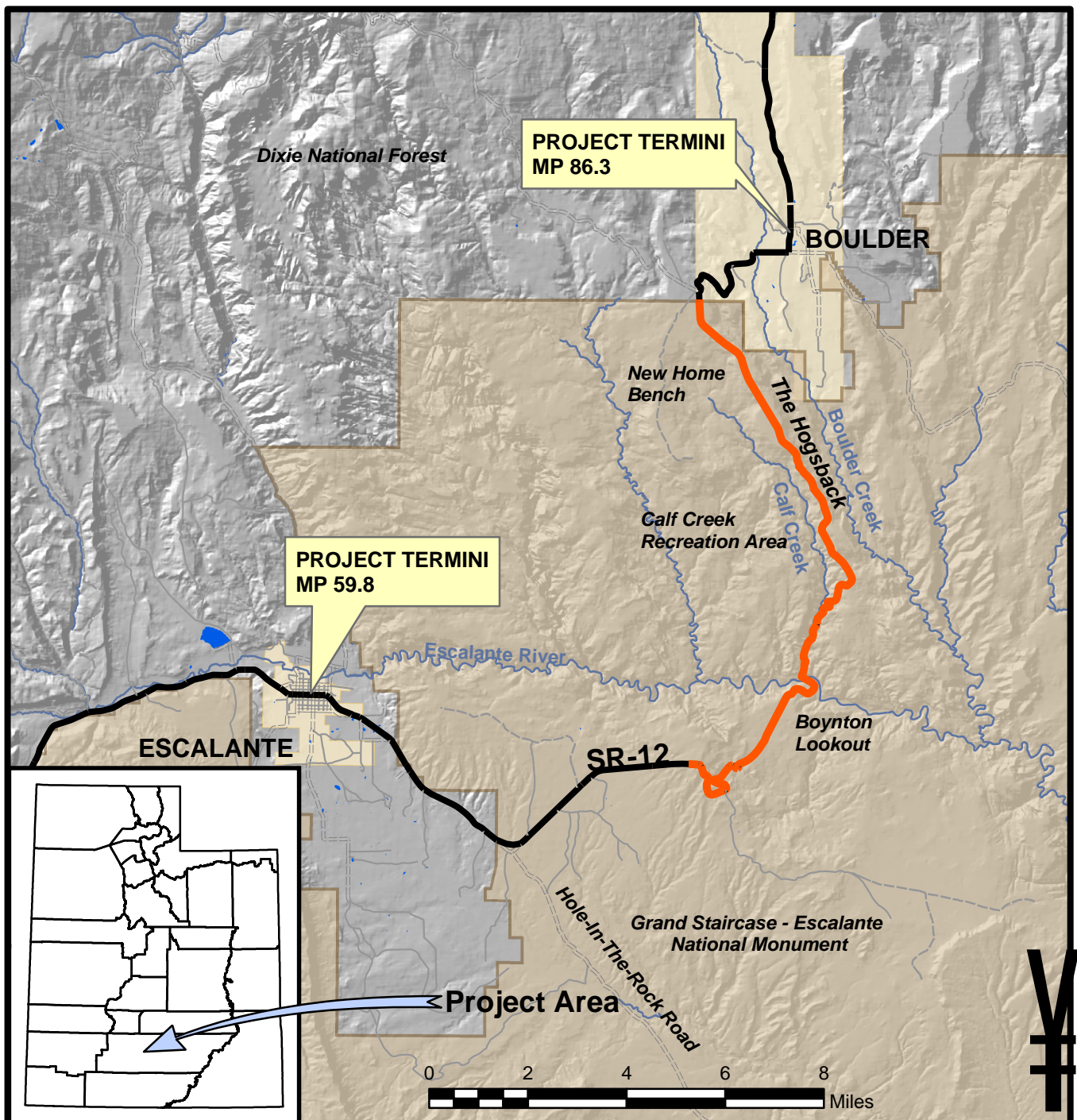
Many comments received from the public indicate a high level of frustration with the lack of passing opportunities. Examples include “The road is too narrow with very few places to pass slow vehicles” and “Tourists make traveling this road complicated and dangerous.” In regards to RV congestion, comments included “Can’t pass them,” “Can’t see around them,” “They don’t go the speed limit,” “They block views,” etc. Support for turnouts measured 78 percent on submitted public comment forms. (See Section 6.4.2 for more detail on comment forms.)

Future Conditions

Between Escalante and Hole-in-the-Rock Road, SR-12 had an average annual daily traffic count (AADT) of 1,230 in the year 2004. From Hole-in-the Rock Road to Hell’s Backbone, AADT was 735, and, between Hell’s Backbone and Boulder, AADT was 585. Traffic on SR-12 is expected to increase at an average rate of 3.4 percent each year and double by the year 2030.

Traffic operating conditions are often measured by level of service (LOS). LOS reflects the amount of congestion and delay that motorists experience. LOS A is the best rating and indicates extremely favorable progression and insignificant delay; LOS F is the worst rating and indicates unacceptable progression with excessive delays.

Between Escalante and Boulder, SR-12 currently operates at a LOS A. The LOS is expected to fall to LOS B by the year 2030 with or without the proposed action. Therefore, additional capacity is not part of the project's purpose and need. Although LOS A and LOS B are both considered acceptable, this measure does not take into consideration travel time and delay related to conflicts with differing user groups and can be a misleading measure of effectiveness for a corridor like SR-12.



PROJECT AREA

- State Route 12 (Undefined RS-2477 ROW width)
- State Route 12 (ROW width defined)
- Lakes
- Stream
- Grand Staircase - Escalante National Monument Boundary
- Municipalities

*Sources: AGRC (2002), BLM Grand Staircase Escalante National Monument (2006), and Garfield County (2003)